

A STUDY OF MATURE STUDENTS AT
MEMORIAL UNIVERSITY OF NEWFOUNDLAND

CENTRE FOR NEWFOUNDLAND STUDIES

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JOHN W. BUDGELL



A STUDY OF MATURE STUDENTS AT
MEMORIAL UNIVERSITY OF NEWFOUNDLAND

BY

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A thesis presented to the School of Graduate
Studies in partial fulfillment of the
requirements for the degree of
Master of Education

Department of Educational Psychology
Memorial University of Newfoundland

March 1985

St. John's

Newfoundland

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ISBN 0-315-30997-0

ABSTRACT

This study was designed to compare the academic performance of students admitted to Memorial University of Newfoundland as mature students with those who were admitted under the normal academic criteria. Mature referred to those students who were 21 years or older, with less than a Junior Matriculation level of education upon admission to university. The sample for this study was comprised of all mature students (208) for the period 1973 - 1978 inclusive, and an equal size control group comprised of regular students, randomly chosen.

A second section of this research involved a study of motivation as measured by an inventory of self-actualization administered to a random sample of mature and regular students.

The data were analyzed by means of descriptive statistics as well as appropriate inferential procedures.

Analysis revealed that the academic performance of regular students was significantly higher than mature students. The relationship between academic achievement and a number of demographic variables was researched and results showed significant differences between mature and regular students for such characteristics as sex, age,

level of education, and marital status. The study demonstrated that mature and regular students did not differ significantly with regard to motivation.

Major recommendations from this study were as follows:

(1) that admission procedures be improved upon. (2) that admissions procedure for mature students include pre-admission seminars and/or induction course. (3) that the university establish a minimal education level for acceptance to university. As well, suggestions were made for further research in this area.

ACKNOWLEDGEMENTS

The writer wishes to acknowledge with sincere gratitude, the guidance and support offered by Dr. Glenn Sheppard in supervising this study. I would also like to thank Dr. William Spain, and Mr. Greg Bennett, for their advice on statistical and computer programming matters.

Appreciation is extended to Ms. Sheila Devine and Mr. Leo Mackey from the Registrar's office for their assistance with data collection.

Sincere thanks is also extended to Judy Ward for her valued assistance with typing and organizing this research.

The writer wishes to express his appreciation to his wife, Judith, for her support and encouragement.

This thesis is dedicated to my parents, Frederick and Dora Budgell, whose commitment to my education made this study possible.

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CHAPTER I

STATEMENT OF THE PROBLEM AND RATIONALE

In 1966, Memorial University of Newfoundland introduced a 'Mature Student' clause into its admission requirements. This permitted persons twenty-five years old and over, and having less than a Junior Matriculation level of education, to apply for admission. The age of acceptance as a mature student was later lowered to twenty-one (1969).

It is now more than 15 years since this clause was introduced, and during this time, there has not been any systematic follow-up to assess how effective it has been. It would seem appropriate and desirable to seek more specific information as to how students admitted under this clause compare, academically, with those admitted through the regular admission channels. Indeed, the Admissions Office has expressed a need for such information (see Appendix).

Most universities in Canada have a similar admission clause for mature students, but the literature indicates only a minimum of research to assess the achievement of persons admitted through this clause.

There are a number of questions with regard to what

might be the significant correlates of academic performance for mature students. For example, the age range for mature students is presently from 21 to 60 inclusive; yet little is known of the potential relationship between age and academic achievement for such students. Academic achievement, in this instance, may be defined in terms of average grades, classification of degree, dropping out or persisting to graduation.

At present, there are no clearly defined minimum educational requirements for admission as a mature student. The Admissions Office would like to determine the relationship between the academic success of the mature student and his/her educational background, typically defined as the number of years of schooling or last grade attended. It is felt that this study will assist the Admissions Office in deciding whether it is necessary to establish a minimum educational level for mature students.

The purposes of this study were to determine how mature students compare, academically, with students who qualify under the normal academic criteria, and to determine whether, for the mature group, there was a relationship between students' academic success and such factors as age, academic background, marital status, faculty, and residency status.

The results of this study will provide a basis on which the mature student clause may be evaluated and will assist the Admissions Office in determining whether present age and educational criteria for accepting mature students should be revised.

In reviewing the literature, it was observed that a wide range of variables had been studied in relation to the academic achievement of the adult learner, including socio-economic status, course load, distance travelled to institution, sex, and so forth. This study has chosen only those variables for which evidence found in the literature is either inconclusive, or has not been addressed.

In commencing research on mature students at Memorial University, a number of interviews were held with the Registrar and his assistant, who subsequently prepared a list of fifteen (15) research questions that they wished to have addressed (see Appendix). Some of these questions (i.e. reasons for pursuing a university career, need for special counselling services) have already been researched with quite consistent findings (Beagle, 1970; Scott, 1981; Roderick and Bell, 1981; Swarm, 1982). Therefore, there appeared to be no compelling reason for inclusion of these factors in this study.

In prioritizing the list of research questions, the Registrar's staff indicated that the most important research questions were (1) whether or not the mature learner achieved as well as regular students, and (2) whether or not there is a correlation between the academic achievement of the mature learner and prior level of education.

Ryan (1969), Reed & Murphy (1975), Van Helden (1975), and Winslow (1968), all found very little correlation between high school performance and adult academic achievement at college. None of these studies, however, distinguished between those adults who met normal admission requirements and those who did not. This study has considered the academic performance of mature university students with different educational backgrounds.

Another variable researched in this study is residency status (Resident/Non-resident). For this study resident refers to those students who resided within the University district at the time of admission, while non-resident refers to those students who had to relocate to the University district. Several studies referred to adjustment problems associated with relocation, but the studies did not address the specific question of whether residents performed differently than non-residents.

French (1977) reported that students living with their parents scored significantly higher mean semester grade point averages than the group, comprised largely of non-residents, living in University residences, apartments, and boarding houses.

Regarding marital status, Beagle (1970) reported that the academic achievement of married adult students was significantly higher than that of the single adult. Bhatnagar (1975) reported a greater drop-out rate among married students, regardless of age. Given the results of the limited research, it would seem to be appropriate to include the variable marital status in studying mature learners at Memorial, to determine whether or not the results by Bhatnagar (1975) and Beagle (1970) will hold true when comparing average grades and drop-out rate for students comprising the same sample.

A number of studies have examined the academic performance of males vs females, and since their findings are inconclusive, this variable has been included in this research. Beagle (1970) reported that the academic achievement of female adult students was significantly higher than that of the male adult students. Similar findings were reported by Seltzer (1976) and French (1977). However, Bhatnagar (1975) and Ulmer & Verner (cited in

Bhatnagar, 1975) reported that female adult students drop out more often than males.

Peggy Beagle (1970) indicated that, since her research did not support previous studies (which suggested that mature students achieved at a higher level than regular students), a replication study was necessary. This research is not a true replicate of Beagle's study as it has not included all the demographic variables included in her research, but rather only those variables for which the literature is inconclusive. The two may, nevertheless, be compared with regard to the issue of the comparative academic achievement of mature and regular students. It is felt that since Beagle's hypothesis was not supported by her results, the author will pose a research question regarding the relationship between the academic achievement of mature students and regular students.

The author feels that a similar study to that of Beagle is necessary because it appears her study was one of only a few completed at a university having an undifferentiated program of study for both mature and regular students. Many universities and colleges, at which other studies were completed, had special programs for adult students. This may account for the difference

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in the results of comparisons for the academic achievement of adults and regular students,

Memorial University, likewise, has the same program of studies for both mature and regular students and is therefore a good setting to complete a study similar to that of Beagle. The results of the present study may be compared with those of Beagle's research, and will provide valuable information to other universities having the same program for both mature and regular students.

From a review of the literature, it is evident that many researchers express the assumption that adult students achieve, or can be expected to achieve as well as, or better than, younger students because they are more mature, and more highly motivated to achieve.

(Barrett & Powell, 1980; Beagle, 1970; Clarke, 1983; Martin, 1977; Perkins, 1971; Scott, 1981; Seltzer, 1976; Sullivan, 1966; Van Helden, 1975; Winslow, 1968).

However, despite these frequent references to such maturity and motivation, the validity of this assumption has not been tested in any of the studies referenced in the present research. This might be due to the following reasons:

- (1) Achievement motivation is one of those complex and multi-dimensional constructs, and thus very difficult to measure in an appropriate manner.

- (2) The most widely used tests of achievement motivation are projective; and therefore time consuming to administer and difficult to score.

The achievement motive has been conceptualized in a variety of manners including need for achievement (n/Ach) defined by Murray (1938) as:

the desire or tendency to do things as rapidly and/or as well as possible ... to accomplish something difficult. To master, manipulate, and organize physical objects, human beings or ideas. To do this as rapidly and independantly as possible. To overcome obstacles and attain a high standard. To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent. (Murray, 1938, p.164).

Others who have viewed the achievement motive in this way include Atkinson (1957, 1978), McClelland (1951, 1955) and McClelland, Atkinson, Clark & Lowell (1953).

Motivation has likewise been perceived as risk-taking (Atkinson & Feather, 1966), desire for success and fear of failure (Atkinson, 1957, and Heckhausen, 1967) and future orientation (Raynor, 1969, 1970).

The complexity of achievement motivation is further demonstrated in a study by Uguroglu and Walberg (1979), who analyzed 232 correlates of motivation and academic learning, reported in forty studies, and found a positive correlation in ninety-eight (98) percent of the reported correlations. Achievement motivation, then, is a complex,

multi-faceted construct that may be influenced by situational and personality factors.

Humanistic psychologists such as Goldstein, Maslow, Adler, Rogers, and Frick theorize that it is not practical to isolate the possible components of motivation, but rather perceive motivation as an innate growth force within the personality. The individual is perceived always as a unified whole, and what happens in any part of the organism affects the entire organism (Goldstein, 1939). Maslow (1968) refers to the individual as "an integrated, organized whole", meaning that "the whole individual is motivated rather than just a part of him" (p.19).

Those theorists start with the premise that there is an innate 'drive' in humans to perfect themselves ... "one sovereign need, one dynamic force for growth and development of the personality" (Frick, 1982). This powerful force is directed towards 'self-actualization', defined by Maslow in Lowry (1973) as "the desire to become more and more what one is ... to become everything that one is capable of becoming" (p.163).

This self-actualization represents the highest of human needs in Maslow's theory of motivation. Maslow sees development of the individual through an ascending

hierarchy of classes of needs ranging from physiological needs to safety needs, to belongingness and love needs, to esteem needs, and finally to self-actualization.

This theory advocates that a person can move to the next stage of development when a large percentage of existing needs has been gratified. The organism progresses from one that is preoccupied with satisfying basic human needs to one, who at the level of self-actualization, is free to cultivate all potentialities.

Frick (1982) has built upon the work of Maslow and has introduced a cognitive element into the self-actualization process. He has postulated that progress in the self-actualization process requires some conceptual orientation toward one's own development. A basic insight into 'life as process', recognizing the evolution of one's personality, and a recognition of change and adjustment to change, being able to conceptualize our life experiences, and feeling a part of life, are all essential to self-actualization.

A review of the relevant literature reveals that most of the responses from mature students, concerning their interest in, goals for and need for, post-secondary education, may be considered to be at a high level of self-actualization, with emphasis on personal growth.

This is evidenced by these various views:


1. To broaden and develop themselves intellectually (Martin, 1977).
2. To enhance personal development (Barrett, 1977).
3. Commitment to studies (Barrett & Powell, 1980).
4. The satisfaction of being able to do something well, to understand something not understood before, to feel or experience something that was not felt or experienced before (Barrett & Powell, 1980).
5. Increase knowledge and understanding (Markus, 1973).
6. Feelings of accomplishment gave new confidence and self-respect (Markus, 1973).
7. To enhance interpersonal relationships (Markus, 1973).

Many researchers and commentators on the performance of mature students tend to consistently judge them to be more mature and more highly motivated than their younger counterparts, and this is assumed to be the reason why they are judged to do as well as, if not better in some cases, than regular students. Less often, but still at a prevalent rate, the kind of motivation implied appears to be similar to the Maslowian construct of 'self-actualization'.

In reviewing the various studies on adult learners, and their motives for post secondary education, we observe that their self-reported motives tended to be at

a need satisfaction level which would place them, if one were to use a Maslowian model, at a high level of self-actualization.

However, this particular observation seems not to have been tested empirically, and since the self-actualization theory of motivation seems to be endorsed by a wide range of researchers and psychologists, it seems reasonable to pursue a study to examine this question. More precisely, the second component of this particular research is designed to answer the question: Will a group of mature students at Memorial University score higher on a test of self-actualization as compared with a group of regular students?



Research Questions

More specifically then, this study was designed to examine the following research questions:

1. Do persons admitted to Memorial University of Newfoundland as mature students have a different level of academic achievement than regular students as determined by (1) average grades, (2) drop-out rate, and (3) class of degree?
2. What is the relationship between academic achievement and level of educational background for mature students?
3. What are the salient attributes of mature students at Memorial University with regards to sex, age, marital status, educational background, and residency status?
4. Is there a relationship between academic achievement for mature students as compared to regular students, on such selected variables as sex, marital status, residency status, age, and faculty?
5. Are mature students at Memorial University more highly motivated, as measured by a test of self-actualization, than regular students?

Definition of Terms

- Academic performance - except where specified otherwise, this term refers to average grades.
- Average grades - average grade scores attained in course evaluations.
- Faculty - faculty in which student had registered.
- Level of Education - refers to level of education attained prior to admission to university.
- Marital status - married or single.
- Mature student - student who was 21 years or older, and having less than a grade XI matriculation, upon admission to university.
- Non-resident - student who had to relocate to the university district upon admission.
- Persistor - student who persisted in a particular program.
- Regular student - student who was less than 21 years old, and having a grade XI matriculation upon admission to university.

- Required drop-out - student required to withdraw for failing to maintain good academic standing.
- Residency status - resident or non-resident.
- Resident - student who lived within the university district at time of admission.
- Voluntary drop-out - student who withdrew voluntarily from university while in good academic standing.

Limitations

One of the limitations of this study is that although the entire population of mature students was utilized for the five year period indicated, there was underrepresentation in some cells for various demographic factors. This was particularly evident in studying various categories of factors such as age, level of education, and faculty.

A larger sample would reduce the likelihood of such underrepresentation, and would enable the researcher to have greater confidence in the conclusions derived from the results.

This study has concentrated on only five variables that may be related to academic achievement. Past studies have looked at other variables including course load, socio-economic status, and so forth. It may be that all these variables may contribute to a student's academic success more than the variables addressed in this study.

One final limitation of this study is in the instrument utilized to compare the motivation of mature and regular students respectively. This self-actualization inventory was not designed, specifically, for use in the manner chosen in this study, although the authors of the inventory indicated that it was useful for comparison of

need profiles for various homogenous groups. Its effectiveness as an indicator of level of motivation requires further validation and study.

CHAPTER II

REVIEW OF THE LITERATURE

Most Universities in Canada presently have a mature student plan to facilitate admission of students who do not meet the basic educational requirements of a particular University. This plan originated at some universities following the Second World War to accommodate some of those persons who had their education interrupted by the war, but who now wished to pursue their education.

Admission Criteria For Mature Students

At present the minimum age for consideration as a mature applicant is twenty-one for most universities (at Simon Fraser, Carlton, and McGill, the minimum age is twenty-three). At some British universities, the minimum age for admission as a mature student is as high as 26 years. The general criteria for admission as a mature student, are as follows:

- age twenty-one, except for those mentioned above.
- less than the basic minimum educational requirements established for a particular institution.
- at least two letters of reference.

In addition, some universities may require the student to take a 'College Qualification Test' and/or.

attend an interview.

Memorial University requires its mature applicants to supplement the regular application form with the following:

- (a) letter explaining grounds for requesting special consideration.
- (b) marks of last grade completed in school.
- (c) copies of any certificates, diplomas, etc.
- (d) two letters of reference.

In the author's interviews with an Assistant Registrar responsible for admissions at Memorial University, he was informed that the two letters of reference have greatest influence on whether or not an applicant is accepted. Of course, the Admission Office must be satisfied that the referee is not a relative, and is a person who occupies a responsible position in the Community (i.e., Clergy, Teacher, Employer). Because of their close contact with the applicant, referees will be able to indentify some of the qualities that are considered when admitting mature applicants. These qualities include conscientiousness, maturity, ability to communicate, confidence, ambition, and leadership, plus evidence that the applicant has the ability to succeed in university studies.

Breland (1983) indicated that although letters of recommendation may not be useful for all applicants, they were useful for some subgroups including marginally qualified candidates.

As was indicated earlier, most Canadian universities have a mature student plan; but the literature indicates that only the University of Lethbridge (Alberta) and Lakehead University (Ontario), have completed exploratory research to ascertain the success of students admitted under this plan.

Perkins (1971) compared a group of mature students at the University of Lethbridge with four groups of students having attained senior matriculation. He compared their performance on a test of general educational achievement (CQT) and also compared their grade-point-average (GPA). The mature students had the lowest mean score on the College Qualification Test (CQT), but they had the highest accumulative grade-point average of the five groups. One limitation to this study, which may account for the mature students having the highest GPA, is that most of the mature students tended to enroll in the Arts and Humanities, which showed considerably higher GPA's than other faculties. A comparison of academic achievement by faculty, as the author has done, should

point out the existence of such bias.

The results of a study by Beagle (1970) at Lakehead University, Ontario, indicated that adults, (25 years old and over), as a group, achieved at a higher level than regular college age students (under 25); and matriculation status on admission had no significant influence on academic achievement.

Dennison and Jones (1969) completed a study on the academic achievement of mature students who transferred to the University of British Columbia from the Vancouver City College (VCC). They defined mature students as those who were twenty-five years of age or more at the time of admission to university. They compared the academic achievement of the mature students with that of the regular students at both College and University, and found that the mature student had a higher mean GPA (2.92) than the regular students (2.44).

The study by Dennison and Jones (1969) defined mature students only in terms of age and did not consider the level of education of the student upon admission to Vancouver City College. Furthermore, since subjects chosen for that study were comprised of students who had already graduated from a city college, one would not expect to find any difference between mature and less

mature, chronologically. It is therefore difficult to generalize the results of this study to a more heterogeneous group of mature students.

Carlson (1973) completed a study of 384 women, thirty-five years and over, who were enrolled as undergraduate students at the University of Washington in 1968. In a questionnaire designed to study the characteristics of these women (their age, marital status and motivations), and to follow up their academic achievement, Carlson learned that eighty (80) percent had earned a baccalaureate degree in the four year period since enrollment. In addition, almost half were planning to earn higher degrees, and seventy-two (72) percent were employed at the time of the survey. It can be seen then that these mature women demonstrated a high level of success both in attaining a degree and meaningful employment.

Most studies have studied the mature student using an age criterion only, and did not distinguish between those mature learners who satisfied general entrance requirements and those who had less than the general entrance requirements and were admitted via a special admissions program.

In comparing the academic achievement of older

students with that of conventional students, the evidence is conflicting for those studies that utilized only chronological age as a criterion for mature students. Furthermore, there was not any consistency of age criterion amongst these studies, but most considered the "adult student" to be twenty-five years or older.

Some studies report that the older student does not perform as well as the younger student. (Barnett & Lewis, 1963; Flecker, 1959; Howell, 1962; Kapur, 1972).

Other studies reported that there was not any significant difference between older and younger students. (See Billingham and Travaglini, 1981; Nisbet and Welsh, 1972; Seltzer, 1976; Winslow, 1968; and French, 1977).

The following reported that the older student's performance exceeded that of their younger counterparts: Beagle, 1970; Dennison & Jones, 1969; and Perkins, 1971.

Research dealing with those mature students who have not met the general admission standards, is extremely limited, and evidence of their performance in relation to their younger counterparts is quite inconclusive.

In Canada, only Beagle (1970) and Perkins (1971) have made this distinction, and both have recommended further study because of the inconclusive nature of the results of their particular studies.

This dearth of research holds true for universities outside of Canada as well; results of such studies are likewise inconsistent.

Sikula (1979) reported that the failure-success ratio for mature students was three to one (3 to 1), with only 25% of them attaining at least a 'C' average, raising the question as to whether such a low success ratio could justify the mature student program.

Another study suggesting that mature students do less well academically is that of Roderick & Bell (1981) who reported higher drop-out rates, and lower degree class for this group.

Studies reporting that the mature student performed as well as his more qualified younger counterparts include those by Barrett & Powell (1980), and Walker (1975). Barrett & Powell studied the performance of the mature student and found that 66% graded passes were achieved; but they did not compare their success with the younger students.

The Barrett & Powell (1980) study was completed at the University of New South Wales, which has an elaborate admissions procedure consisting of seminars, pre-admission assignment, and an induction course with an open book assignment. Such an admission policy and

procedure would likely eliminate the lower achievers, and could probably account for the reported high percentage of graded passes.

In summarizing the literature, one cannot formulate any definite conclusions regarding the mature student, as the evidence is quite inconclusive regarding adult university students, regardless of whether they met the general admission requirements, or were admitted through some special admission procedure.

There appears not to be any uniformity of admission criteria; and, more critically, there appears to have been very little assessment of the various admission policies regarding the mature applicant.

Relationship Between Age and Academic Achievement

There has been only limited research directed towards the relationship between age and academic achievement, and the focus has predominantly been on the relationship between 'age and drop-outs' rather than on 'age and GPA'.

French (1977) studied selected factors related to grade point average for third year or later students in the faculty of Education at Memorial University and

reported that age did not contribute significantly to the total amount of variance in semester grade point average.

Ulmer, and Ulmer & Verner (cited in Bhatnagar, 1975) studied the relationship between dropping out and age, and found no significant difference between the ages of those who dropped out and those who persisted.

Bhatnagar (1975) on the other hand, found a curvilinear relationship between age and drop-outs. Students in the age categories 20-25, 36-40, and 41-plus showed higher drop-out rates, while those in the age ranges 26-30, 31-35 showed higher persistence rates. The largest percentage of drop-outs was in the 20-25 age group (58.7%).

In studying the degree completion rate of students, Van Helden (1975) found that students in the 22-25 year old category had the poorest degree completion rate (18.2%) as compared with 40% for the under 22 group, and 45% for all older (over 22) students.

Billingham & Travaglini (1981), in their study of students who entered the Central Michigan University Individualized Degree Program (IDP), found that students who entered the program before age thirty (30) made more

rapid progress toward graduation than those above thirty (30).

From the research of the literature, the author has been unable to find statistics for mature students in each of these age categories.

Sullivan (1966), in investigating the performance of Memorial University students for the fall term 1966, found that there was a high failure rate for students of twenty-five years old and above. He noted a clear tendency for proportion of failures to increase up to age 18 or 19 and then to decline up to age 25 - at which point the failure rate increased again. These results appear contrary to those of Bhatnagar (1975), and Van Helden (1975) but it is difficult to compare these two studies as Sullivan's was concerned with part-time students.

Dennison and Jones (1969) found that the ratio of failure grades amongst mature students was less than that of the under twenty-five group. The age of groups of the mature students was not stratified further and compared with academic achievement, as has been done in this study.

To summarize the relationship between age and academic achievement, it is felt that the evidence is

inconclusive, as the conclusions about these two variables are inferred from results of studies investigating the relationship between age and drop-outs more so than between age and grade point average.

Educational Background

Another variable that has been discussed in the literature with regard to its relationship to academic achievement is educational background. Both Douglas (1931) and Travers (1949) studied this relationship and concluded that there was no significant relationship between subjects studied at High School and success at university.

Cook (1961, 1962) compared the grades of College students who had taken a college preparatory course of studies with those who had taken non-college-preparatory courses, and he found no significant difference.

Brown (1980) compared the grades of Vocational School students from five educational backgrounds, and reported that students having a high school academic level of education attained higher grades than students from other groups.

Holahan, Green, & Kelly (1983) compared the

graduating rate of students entering university from a Junior or Senior College with that of students coming directly from high school, and reported no significant difference between the three groups.

In one of three studies by Swarm (1982) it was reported that students having a general education development (GED) level of education attained lower grade point average (GPA) than the younger students who had a traditional high school average. In another of her studies, however, GED Students had a higher GPA than the mean GPA of all students at their respective colleges.

Brown (1980) and Hynes (1982), investigated the achievement of former adult basic education (ABE) students who were enrolled in vocational training programs in Newfoundland, and found that they attained total grade point averages that were significantly lower than those students who possessed a regular high school background.

It was indicated in an earlier section that Perkins (1971) found that his sample of mature students, all of whom had less than a Junior Matriculation, attained a higher grade-point-average than those having at least a Junior Matriculation level of education.

Beagle (1970) hypothesized that non-matriculation adult students would perform as well as, or better than, regular students. However, the results of her study did not support this hypothesis.

Bhatnagar (1975) studied the relationship between prior preparation for University and the drop-out rate and found that there was a lower drop-out rate for students possessing a High School Diploma, than for those with lesser qualifications.

Van Helden (1975), in a study of adult students found very little correlation between the adult student performance and high school examination results. Similarly, Ryan (1969) and Winslow (1968) found that high school grade point average was not a good predictor of college GPA for adult students. Reed & Murphy (1975) found that as age increases, the use of GPA as a predictor of academic success in college becomes less reliable. As was noted earlier in this chapter, Beagle (1970) found matriculation status not to be a significant factor in the academic performance of adult students, and she recommended that a study be completed taking into account the actual level of previous education.

To summarize the findings of research into the relationship of educational background and academic achievement at University, it seems that there is no significant difference between the academic achievement of students with Junior Matriculation and those with lesser qualifications.

All of the studies mentioned above have compared

academic achievement of regular students with achievement of mature students as a group and have not considered the different levels of educational background within this group. This study, in addition to comparing mature students, as a group, with regular students, has also compared the academic achievements of mature students with differing educational levels. (i.e. Grade XI, Grade XI Equivalency (GED), Grade XI (+) post-secondary, less than Grade XI (+) other, Grade X, less than Grade X).

Motivation of Mature and Regular Students

Motivation as a construct has been a topic of considerable interest to psychologists for over a century now, with earliest references surfacing at about 1884, with the James-Lange theory of emotion. From a summary of the development of motivation in Ryans (1980) it appears that early research was directed towards relationships between behavior, reinforcements, and emotions and drives. From the 1930's onward, however, a cognitive element was introduced into motivation theory, and this approach was pioneered by the work of Murray (1938). From a comprehensive study of 50 male

subjects, Murray and his associates developed a complex taxonomy of personality needs which have been grouped into the following categories: (1) needs related to student tasks, and (2) needs related to interpersonal relationships. From Murray's list of needs, need for achievement (n/ACH) appears to have attracted the most interest by researchers, most prominent of which seem to be McClelland (1951), and his associates. Regarding motives to achieve, McClelland, Atkinson, Clark, and Lowell (1953) suggest that:

All motives are learned ... they develop out of repeated affective experiences connected with certain types of situations and types of behavior. In the case of achievement motivation, the situations should involve standards of excellence ... and the behavior should involve competition with those standards of excellence or attempts to meet them which, if successful, produce positive affect or, if unsuccessful, negative affect. (p.276).

McClelland then hypothesizes that the organism has a desire to maximize positive affect, and to minimize negative effect. He theorized that the determinant of whether an organism would approach or avoid a given situation would be the magnitude of the perceived discrepancy between that situation and past levels of adaptation. If cues received from a new achievement situation are perceived by the person to be only

moderately discrepant from previous adaptation levels, the person would likely approach, and persist in, achievement-related situations. Such a person is seen as having high n/Ach . Persons with low n/Ach are those who perceive the cues from new achievement situations as being highly discrepant from previous adaptation levels, and would likely avoid them, or withdraw. Atkinson (1957, 1978) perceived this approach-avoidance relationship not only in terms of motivation to achieve but also in terms of avoiding failure, and pride of accomplishment.

The most common measure of need for achievement is the Thematic Apperception Test (TAT), a projective measure in which fantasy responses, elicited in response to a set of picture cards, are analyzed for their motivational content. Other projective measures that appear to have been derived from the TAT include the French Test of Insight (FTI), Iowa Picture Interpretation Test (IPIT), Graphic Expression Technique, and Knapp Tartan Test.

A number of comprehensive personality inventories, including the Edwards Personal Preference Schedule and the California Psychological Inventory, contain statements that are designed to address the motivational factor.

Fineman (1977) summarized eleven questionnaire scales which have been designed to measure n/Ach, and reported that appropriate reliability and validity had not been met in any one instrument, and that they tend not to correlate with projective measures such as the TAT.

The Maslow concept of motivation, on which this study is focused, has had its roots in Murray's taxonomy of needs. Maslow postulates that human needs are organized in a hierarchial system, and will emerge sequentially as the majority of needs in the lower order are satisfied. The categories of needs comprising this system range from (1) physiological needs to (2) safety needs to (3) belonging and love needs to (4) esteem needs to (5) self-actualization needs. West & Glass (1981) point out that Maslow's hierarchy spans the entire motivational continuum, emphasizing basic need reduction as a source of motivation as well as a source of self-actualization activity.

Maslow and other humanistic psychologists recognize an innate striving within the organism to develop its full potential and has been expressed as a need for self-actualization. Frick (1982) refers to this force as "some fundamental energy that strives for the actualization of human potentials" (p.35).

From the literature, it appears that tests of motivation that are based on self-actualization theory have been developed largely for workers within organizations, and there appears not to be a self-actualization measure that has been developed specifically for post-secondary educational settings. Korman (1974) comments on how little research, generally, has been directed towards Maslow's theory of motivation, despite the apparent great popularity of his self-actualization process.

Argyris (1951, 1960, 1964) has studied self-actualization of persons within organizations and has suggested that a semi-structured research interview be utilized to measure employee self-actualization. The responses by a subject to the set of questions in the interview are analyzed to identify needs that the participant wishes to satisfy while at work. Bonjean & Vance (1968) outline a number of practical implications for a measure of self-actualization. They indicated that assessment of employee's relative self-actualization would enable a manager to better predict turnover and absenteeism, and to readily identify potential problems within the work place. They indicate also that the self-actualization measures might be useful in personnel

placement and selection.

There is evidence, then, that self-actualization measures have been useful in other than academic settings, but there appears to be no research that has assessed whether they are useful as a counselling aid, or as a selection and placement tool, or as a predictor of success at post-secondary facilities. Reddin & Rowell (1975) developed a self-actualization inventory which was validated by utilizing subjects from a number of organizations. They maintain that this inventory is also appropriate for use with college students, even though college students did not constitute a part of the sample used to establish the reliability and validity of this instrument.

To summarize the research on measures of self-actualization, it appears that very few instruments have been developed. Those that have been developed have been utilized primarily by organizations, although they have had limited application, as a counselling aid, for certain disadvantaged groups such as those in a psychiatric setting. At present, it appears that research directed towards self-actualization, as a measure of motivation for college students, is extremely limited.

CHAPTER III

PROCEDURES & METHODOLOGY

General Procedure

Subjects for this study were chosen from students in full-time attendance at Memorial University of Newfoundland for the period 1973 to 1984 inclusive. This study is comprised of two related sections, (1) dealing with the academic achievement of mature learners in relation to regular students, and (2) involving a study of motivation of mature and regular students as measured by an inventory of self-actualization.

The section which compares the academic performance of mature and regular students was completed in 1978, and subjects were chosen from students in full-time attendance for the period 1973-1978 inclusive.

The inventory of self-actualization was administered in 1984, to a random sample of both mature and regular students. Although these subjects did not comprise part of the original sample, it is nevertheless appropriate to generalize their results, as it is unlikely that there will be any fundamental differences, over time, in the general motivational aspects of the student population. However, this assumption is made with some caution since there have

been changes which might conceivably affect the composition of the mature student population. These include the worsening economic conditions, the re-organized secondary school program, and increased emphasis on adult education.

Sampling

In comparing the mature students with regular students, subjects were chosen from full-time students for the five academic years 1973-1978 inclusive. The reasons for choosing these particular years are as follows:

1. They succeed the change in 'age requirements' of 1969 by more than three years, which provided ample time for this change to be well known.
2. Five years was necessary to obtain the desired sample of approximately 200 mature students.
3. Students entering the university during the early years of this period would have had sufficient time to have completed their undergraduate degree.

The total population of full-time mature students (208) for that period was selected, and the number of students in each year of study (i.e. First, Second ... Fifth) was determined. Cluster sampling was then utilized, for each year of study, to choose a proportionate number of regular students. (see Table 1).

Subjects chosen for comparison of academic degree standing (i.e. 1st, 2nd, or 3rd Class degree) were those,

Table 1

Numbers of Mature Students per Academic Year, andCorresponding Sample of Regular Students

Student Status	Academic Year					Total
	First	Second	Third	Fourth	Fifth	
Mature	50	44	41	33	40	208
Regular	50	44	41	33	40	208
Total	100	88	82	66	80	416

from the samples of mature and regular students, who had entered university in 1973 and 1974. These students were chosen because they would have been eligible to receive a degree within the period 1973 to 1978 inclusive if they had successfully completed their respective programs in the standard completion period. (see Table 2).

Subjects chosen for the section of this study dealing with the motivation of mature learners in comparison with regular students were selected from full-time students at Memorial University for the winter semester 1984. Random samples, of equal size, were selected from both mature and regular students. In generating samples, a computer printout was able to provide lists of mature and regular students respectively, from which random samples were physically chosen, using a table of random numbers.

Data Collection

A physical review of the students' academic records at the Registrar's Office was completed to determine (1) previous level of education (2) faculty (3) age (4) marital status (5) residency status (6) drop-out or persisting (7) grade-point average (8) number of students eligible for degrees in the period 1973 to 1978 inclusive

Table 2

Number of Mature and Regular Students Eligible for Degree
Within Period 1973 to 1978 Inclusive

Category Label	Absolute Frequency	Relative Frequency	Ad's Frequency	Cum. Frequency
Mature	72	51.1	59.1	51.1
Regular	69	48.9	48.9	100.0
Total	141	100.0	100.0	

and (9) degree status for those who graduated. Permission for access to students' records was obtained from the Registrar prior to reviewing their records. Data for the motivation component of this study were obtained from raw scores on a self-actualization inventory. Utilizing the computer services at Memorial University, all data were analyzed by utilizing the Statistical Package for Social Sciences SPSS.

Instrumentation

The Self-Actualization Inventory was developed by W.J. Reddin and K. Rowell (1975) to measure the degree to which the following needs are unfulfilled: physical, security, relationships, respect, independence, and self-actualization.

Applying Maslow's theory of motivation to this instrument, it was predicted that a person's need for self-actualization would not dominate until a large percentage of needs lower in the hierarchy had been fulfilled.

This instrument is most useful as a training and counselling aid in that it is able to give individuals insight into their unfulfilled needs. The authors indicate that it is also useful as a research aid in

that need profiles can be plotted, and compared, for various homogenous groups.

The self-actualization inventory consists of twenty-eight (28) sets of three statements, to which the respondent distributed a total of (3) points among each set (e.g. 3,0,0; 1,1,1; 0,1,2). The stronger a subject's agreement with a particular statement, the higher will be the assigned numeral.

The following illustrates the types of statements and the particular scale(s) on which they reflect:

A) Physical Needs

Unfulfilled needs concerned with filling biological appetities.

"I wish I could get more rest."

B) Security Needs

Unfulfilled needs concerned with maintaining safety and security.

"I wish I could buy a bigger insurance policy."

C) Relationship Needs

Unfulfilled needs concerned with obtaining love, affection, and a feeling of belongingness with others.

"I would like to be able to meet with more people."

D) Respect Needs

Unfulfilled needs concerned with obtaining self-respect, and the esteem of others.

E) Independence Needs

Unfulfilled needs concerned with obtaining autonomy.

"I wish that I worked for myself."

F) Self-Actualization Needs

Unfulfilled needs concerned with attaining self-fulfillment.

"I wish that I could realize my full potential."

An equal number of statements were directed to each of these factors.

Scale intercorrelations range from .01 to .05, which suggest that scales are reasonably independent and may be considered separately.

The numerals in each scale are totaled to provide the raw score. The higher the score, the greater the individual's needs for that particular attribute. For descriptive purposes, the raw scores are converted into five categories ranging from very low (VL), low (l), average (Me), high (h), and very high (vh).

The reliability of this Inventory was established through the test-retest method. On a two month test-retest of one hundred seven (107) subjects, correlations

ranged from .74 to .79.

The validity of this instrument was established by utilizing subjects from settings such as business and service sectors. Of the six hundred and three subjects, 536 were managers of varying levels. The authors report sixty-three sample-to-sample comparisons of all significant differences of measures affecting self-actualization factors.

Following a review of the salient features of this instrument, it was decided that the self-actualization inventory was adequate and appropriate for use in this study.

CHAPTER IV

ANALYSIS OF THE DATA

One of the primary purposes of this study was to compare the academic achievement of mature and regular students respectively. To achieve this, a comparison of average grades, rate of drop-outs, and classification of degree was completed.

Comparison of Grades for Mature and Regular Students

In comparing the average grades of both the experimental group of 208 mature students, and the control group of 208 regular students, Table 3 indicated that twenty-seven (27%) of the mature group attained average grades of less than fifty as compared to 17% for the regular students. One hundred fifty-one (151) of the regular students attained average grades of 55 or better as compared to 118 for mature students.

An analysis of variance, (ANOVA) was conducted to ascertain whether the variance for those two groups was significantly different and results indicated that the difference was significant at $< .01$ level of confidence (see Table 4). This indicates that the average grades

Table 3

Numbers and Percentages of Mature and Regular Students in Six (6)Categories of Grades

Student Status	Grade Category											
	0-49.9		50-54.9		55-64.9		65-72.9		73-79.9		80-100	
	N	%	N	%	N	%	N	%	N	%	N	%
Mature	57	27	33	16	69	33	35	17	12	5	2	1
Regular	35	17	22	10	84	40	39	19	18	9	10	5
Total	92	44	55	26	153	73	74	36	30	14	12	6

Table 4

Analysis of Variance of Average Grades for Mature and
Regular Students by Faculty

Source of Variance	Mean Squares	Degrees of Freedom	F	P
Student Status (Mature/Regular)	1349.71	1	8.83	.003**
Faculty	363.15	4	2.38	.05*
Interaction (Student Status/ Faculty)	199.54	4	1.31	.27
Error	152.91	402		

* Significant at .05 level of confidence.

** Significant at .01 level of confidence.

of regular students are significantly higher than those for the mature students.

Rate of Drop Out

In comparing drop-out rate for mature and regular students, numbers and percentages were calculated for students who persisted in their program or dropped out, voluntarily, or were required to leave under university regulations (see Table 5). This table illustrates that 130 of the mature students (63%) persisted in their respective programs as compared with 140 regular students (67%): N equaled 208 for each group.

Of the 78 mature students (37%) who dropped out, 56 were required to leave; whereas for the 68 regular students who dropped out, 42 were required to drop out. Chi square analysis was completed to test the significance of the difference in retention rate between the two groups; chi equaled 2.70, with 2 degrees of freedom. The significance was calculated at .25 suggesting that the difference was not significant. This indicates that mature students were neither more nor less likely to dropout than their younger counterparts.

Table 5

Numbers and Percentages of Mature and Regular Students
in Continuing Attendance, Voluntary Leaving, Required
to Leave

	Continued Attendance		Voluntary Leaving		Required To Leave		Total	
	N	%	N	%	N	%	N	%
Mature	130	63	22	10	56	27	208	100
Regular	140	67	26	13	42	20	208	100
Column								
Total	270	64	48	12	98	24	416	100

Chi Square = 2.7 with 2 degrees of freedom

Significance = .25

Comparison of Class of Degrees

In studying this variable, seventy-two mature students and sixty-nine regular students comprised the total sample (see Table 2).

Table 6 shows the numbers and percentages of first, second, and third class of degrees attained by the mature and regular students. This demonstrates that 14 of the sample of 72 mature students attained a degree, as compared to 26 of the 69 regular students. In the mature groups, 2.7% attained a first class degree, 11.1% a second class degree, and 5.6% a third class degree. Regular students attained percentages of 4.3, 26.1, and 2.3 respectively for the three classes of degree. Chi square analysis was completed to test the significance of this difference; chi equaled 6.32 with 3 degrees of freedom. The difference was calculated at .10, suggesting that the difference between the mature and regular groups is not significant.

Level of Education

In comparing the relationship between academic achievement and level of education upon admission to

Table 6

Number and Percentages of 1st, 2nd, and 3rd Class Degree
for Mature and Regular Students

		Class of Degree									
Student	0		1		2		3		Total		
Status	N	%	N	%	N	%	N	%	N	%	
Mature	58	80.6	2	2.7	8	11.1	4	5.6	72	100	
Regular	43	63.3	3	4.3	18	26.1	5	7.3	69	100	
Column											
Total	101	71.5	5	3.5	26	18.5	9	6.5	141	100	

Chi Square = 6.32 with 3 degrees of freedom

Significance = .10

University, education levels were categorized as grade XI matriculation, grade XI general, grade XI plus post-secondary, less than grade XI plus other, adult education grade XI equivalent, grade X, less than grade X. (see Table 7).

All of the regular students had attained a grade XI matriculation, and Table 3 showed that this group attained significantly higher grades than the mature students, whose educational background was represented by the other six categories. Of the 208 mature students, 99 attained a grade XI general status of high school education, 58 a grade XI plus post-secondary, 12 a grade eleven equivalent (adult education), 5 with less than grade XI plus other, 30 with grade X, and 4 with less than grade X.

An analysis of variance was conducted to determine whether the variance of average grades was significant; the ONEWAY analysis revealed a difference that was significant at the $\leq .001$ level of confidence (see Table 8).

To determine between which levels of education the difference existed, a multiple range test, STUDENT-NEWMAN-KEULS, was utilized and showed a significant difference, at the $\leq .05$ level, between students with grade XI plus post-secondary and those with other levels of education. A review of the means showed mean grades of 63.0 for

Table 7

Numbers and Percentages of Mature Students in Six Categories of Educational Level upon Admission to University

Grade XI General		Grade XI Post sec.		Less Gr. XI Plus other		Grade X		Less Than Gr. X		Adult Education Gr. XI Equiv.	
N	%	N	%	N	%	N	%	N	%	N	%
99	48	58	28	5	2	30	14	4	2	12	6

Table 8

Analysis of Variance of Average Grades for Mature and
Regular Students by Educational Background

Source of Variance	Mean Squares	Degree of Freedom	F	p
Average Grade/ level of Education	1357.95	5	10.8	.001**

** Significant at .001 level of confidence.

students with grade XI plus post-secondary, as compared with means of 55.3, 51.5, 51.2, 50.3, and 30.6 respectively for the other levels of education.

The STUDENT-NEWMAN-KEULS procedure also revealed that students having less than a grade X level of education attained significantly lower average grades than students having a grade X or better.

Educational Background and Dropping Out

This study demonstrated that, although more regular students (140) persisted in their programs than mature students (130), the difference was not significant ($p=.25$).

In terms of a relationship between level of education and dropping out for mature learners, Table 9 shows that 133 persisted as compared with 75 dropping out. It was demonstrated that 20.7% of these students with grade XI plus post-secondary, 36.4% of students with grade XI general, 40% with less than grade XI plus other, 50% with grade X, 100% with less than grade X, and 50% with adult education grade XI equivalent, dropped out.

Chi square analysis was completed to test the significance of the difference in drop out rate for the different levels of education, and chi equaled 29.4 with

Table 9

Numbers of Mature Students Persisting or Dropping Out

	Gr. XI Post-sec.		Gr. XI General		Adult Ed. Gr. Equiv.		Less Gr. XI Plus other		Gr. X		Less GR. X	
	N	%	N	%	N	%	N	%	N	%	N	%
Persistors	46	79.3	63	63.6	6	50	3	60	15	50.0	0	0
Voluntary												
Drop-out	7	22.1	17	17.2	3	25	0	0	4	13.3	0	0
Required												
Drop-out	5	8.6	19	19.2	3	25	2	40	11	36.7	4	100.0
Total	58	27.9	99	47.6	12	5.8	5	2.4	30	14.4	4	1.9

Chi Square = 29.4 with 10 degrees of freedom

Significance = .001

10 degrees of freedom. The difference was calculated to be significant at $<.01$ level of confidence.

This suggests that mature students with a grade XI plus post-secondary level of education persisted in their programs more often than mature students with other educational levels. Seventy-five percent of those students having an educational level of grade X, or less, dropped out, with 68.3% required to drop out.

Relationship Between Academic Achievement and Selected Demographic Variables

This study investigated the relationship between academic achievement for mature students as compared with regular students on such selected variables as sex, marital status, residency status, age, faculty, and educational background.

Relationship Between Academic Achievement and Sex

Table 10 indicates the number of males and females comprising the total sample of mature and regular students, excluding subjects comprising the sample to whom a test of self-actualization was administered.

Of the mature sample, 64.9% were males, and 35.1% females. The sample of regular students was comprised of 45.7% males and 54.3% females. The chi square statistic for goodness-to-fit analysis was run to investigate whether the attained proportions of males to females was representative of expected proportions in the population of university students and chi equaled 14.5 with 1 degree of freedom. Results showed that these differences were significant at the .01 level of confidence, indicating that there were significantly more males than females among mature students as compared with regular students.

Table 10

Crosstabulation of Student Status by Sex

Student Status	Sex				Total
	Male		Female		
	N	%	N	%	
Mature	135	64.9	73	35.1	108
Regular	95	45.7	113	54.1	108
Total	230	55.3	186	44.7	216

Chi Square = 14.5 with 1 degree of freedom

Significance = .01

ANOVA was utilized to determine if there was a relationship between average grades and sex of student and it showed a significant difference, at the .01 level of confidence (see Table 11), indicating that there was a significant difference between the average grades of males and females. To learn the direction of this relationship a comparison of the means revealed that females attained higher mean grades than males. The significance of the interaction between mature and regular students respectively for average grades and sex was reported at .27, indicating that there was no interactive effect.

In comprising the drop out rate by sex for mature and regular students, Table 12 demonstrates that the number of male persistors was 134 ($n = 229$) as compared with 138 female persistors ($n = 187$). It was shown that 41.5% of males dropped out, whereas 25.6% of the females dropped out. Chi square analysis was completed on the differences between male and female drop out rate and chi equaled 10.8 with 2 degrees of freedom. The significance reported at .004 indicated that the differences are significant at the .01 level of confidence. This demonstrates that, at Memorial University, the drop out rate for males is significantly

Table 11

Analysis of Variance of Average Grade for Mature and Regular
Students by Sex

Source of Variance	Mean Squares	Degree of Freedom	F.	P.
Student Status (mature/regular)	1077.37	1	7.09	.008
Sex	1537.34	1	10.12	.002**
Interaction (student status/ sex)	187.25	1	1.23	.27

** Significant at <.01 level of confidence

Table 12

Numbers and Percentages of Persistors and Drop-outs
for Male and Female Students

Retention	Sex					
	Male		Female		Row Total	
	N	%	N	%	N	%
Persistors	134	58.5	138	73.8	272	65.4
Vol. Drop-out	39	17.0	18	9.6	57	13.7
Reg. Drop-out	56	64.4	31	35.6	87	20.9
Total	229	55.0	187	45.0	416	100.0

Chi Square = 10.9 with 2 degrees of freedom

Significance = .01

greater than for females.

In comparing the differences within the mature and regular groups respectively, Table 13 indicates that sex differences are significant at the $<.05$ level, within the mature groups. Chi square equaled 7.35 with 2 degrees of freedom, and significance was observed to be .03. Chi square was utilized to test the significance of differences within the regular group and chi square was found to equal 3.70 with 2 degrees of freedom (see Table 14). Significance was found to be .16, which indicates that the differences are not significant. This indicates that within the mature group, significantly more males than females dropped out. Within the regular group, it was observed that although more males dropped out, the difference was not found to be significant.

Academic Achievement and Age

In the sample of regular students the age range was 16-24 inclusive, and for the population of mature students, ages ranged from 21 to 47 inclusive (see Figure 1). This study was designed to determine if there is a relationship between the age of the mature student and his academic success; for purposes of this study, students' ages were grouped in a number of categories (see Table 15).

To facilitate better statistical analysis, and since

Table 13

Numbers and Percentages of Mature StudentsPersisting or Dropping Out

RET	Sex					
	Male		Female		Row Total	
	N	%	N	%	N	%
Persistors	77	57.5	56	75.7	33	63.9
Vol. Drop-out	25	18.7	6	19.4	31	14.9
Reg. Drop-out	32	23.9	12	16.2	44	21.2

Chi Square = 7.35 with 2 degrees of freedom

Significance = .03

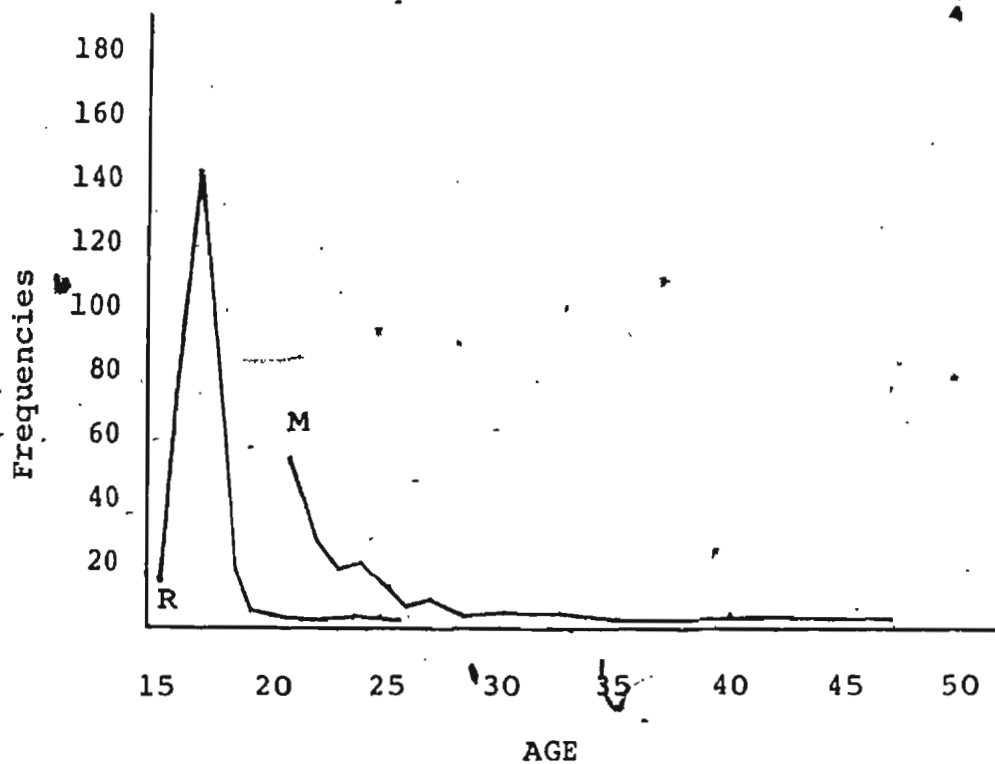
Table 14

Numbers and Percentages of Regular StudentsPersisting or Dropping Out

RET	Sex					
	Male		Female		Row Total	
	N	%	N	%	N	%
Persistors	57	60.0	82	72.6	139	66.8
Vol. Drop-out	14	14.7	12	10.6	26	12.5
Reg. Drop-out	24	25.3	19	16.8	43	20.7

Chi square = 3.70 with 2 degrees of freedom

Significance = .16



Mean age for mature 24.88
Mean age for regular 17.26

Figure I: Distribution of ages for mature (M) and regular (R) students.

Table 15

Numbers and Percentages of Mature and Regular Students by Age

		Age												Total
		16 - 20		21 - 25		26 - 30		31 - 35		36 - 40		41-plus		
Student	Status	N	%	N	%	N	%	N	%	N	%	N	%	
Mature		0	0	151	72.6	28	13.5	19	9.1	7	3.4	3	1.4	208
Regular		203	97.6	5	2.4	0	0	0	0	0	0	0	0	208
Total		203	97.6	156	75.0	28	13.5	19	9.1	7	3.4	3	1.4	416

there were small numbers of subjects in the 31-35, 36-40 and 41-plus age categories, these three categories were combined to facilitate better analysis (see Table 16).

An analysis of variance was computed to ascertain if there was a significant difference between average grades and four categories of ages; Table 17 demonstrates that they were significant at the .05 level of confidence. To determine where the difference existed, a multiple range test, STUDENT-NEWMAN-KEULS, was run and results indicated that the 16-20 age group differed significantly, at the .05 level, from the 21-25 group; the 21-25 age group achieved significantly higher grades than the 31-65 age group. This indicated that the youngest students, in the 16-20 age groups, attained significantly higher grades than the 21-25 group, and this group achieved significantly higher grades than the 31-plus age group.

Academic Achievement and Marital Status

Table 18 shows that 34.1% of students from the mature population were married as compared with 5% for the random sample of regular students. To compare the academic achievements of married and single students only the mature students sample was used due to under representation of married students in the sample of regular students. Table 19 illustrates how married and

Table 16

Number of Mature and Regular Students in Four Age Groups

Student Status	16-20	21-25	26-30	31-plus	Total
Mature	0	151	28	29	208
Regular	203	5	0	0	208
Total	203	156	28	29	416

Table 17

Analysis of Variance for Average Grades and Age for
Mature and Regular Students

Source of Variance	Mean Squares	D.F.	F.	P.
Student Status				
(mature/regular)	731.08	4	4.81	.00
Age	543.24	3	3.57	.01*

* Significant at .01 level of confidence

Table 18

Numbers and Percentages of Mature and Regular Students
by Marital Status

Marital Status	Marital Status					
	Married		Single		Total	
	N	%	N	%		
Mature	71	34.1	137	65.9	208	50
Regular	1	0.5	207	99.5	208	50
Column Total	72	17.3	344	82.7	416	100

Table 19

Average Grades for Married and Single Students in Grade Ranges

Average Grades													
		0 - 49.9		50 - 54.9		55 - 64.9		65 - 72.9		73 - 100			
Status	N	%	N	%	N	%	N	%	N	%	Row Total		
Married	14	19.7	13	18.3	18	25.4	15	21.1	11	15.5	71	34.1	
Single	43	31.4	20	14.6	51	37.2	20	14.6	3	2.2	137	65.9	
Total	57	27.4	33	15.9	69	33.2	35	16.8	14	6.8	208	100.0	

Chi = 19.0 with 5 degrees of freedom

Significance = .0020

single mature students achieved in six age ranges. It is noted that 31.4 percent of single students attained average grades of less than 50 as compared with 19.7 percent of married students in this same category.

For the married students it was found that 62% attained average grades at or above the 55 to 64.9 range, as compared with 55% for single students. An analysis of variance (ANOVA) revealed that the variance between average grades for married and single students was significant at the $< .01$ level of confidence (see Table 20). A comparison of the means for each group revealed that the married students attained significantly higher average grades than single students.

In comparing the drop-out rate for married and single students respectively, again only the mature group was utilized. From Table 21, it can be determined that 29.6% of married students dropped out as compared with 39.4% of single students. Of those students who dropped out, 26.3 percent of single students were required to drop out as compared with 11.2 percent for married students. Chi square was computed and chi equaled 6.527 with 2 degrees of freedom. This difference was significant at the $< .05$ level of confidence. This suggests that although married students dropped out less

Table 20

Analysis of Variance for Average Grades and Marital Status

Source of Variance	Mean	D.F.	F.	P.
	Squares			
Student Status				
(mature)	1861.09	1	12.6	0.000
Marital Status				
(married/single)	1861.09	1	12.5	0.000**

** Significant at .001 level of confidence

Table 21

Numbers and Percentages of Persistors and Drop-outs for
Married and Single Students.

		Drop-Out Status							
		Voluntary				Required			
		Persistors		Drop-out		Drop-out		Total	
Marital									
Status	N	%	N	%	N	%	N	%	
Married	50	70.4	13	18.3	8	11.2	71	34.1	
Single	83	60.6	18	13.1	36	26.3	137	65.9	
Total	133	63.9	31	14.9	44	21.2	208	100.0	

Chi square = 6.527 with 2 degrees of freedom

Significance = .04

frequently than single students, they were more likely to drop out voluntarily.

Relationship Between Faculty and Academic Achievement

Table 22 shows that for both the mature and regular students, the largest number of students, 74 and 64 respectively, registered in Arts. The faculties of Arts and Education accounted for 57.2% of the mature group and 52.4% of regular students.

Ten of the mature students (4.8%) were registered in the faculty of Business, as compared with thirty-two (15.4%) of regular students.

To investigate the relationship between academic achievement and faculty, an ANOVA of average grades for mature and regular students by faculty was completed (see Table 4). The ANOVA revealed that the difference in average grades between faculty, for all students, was significant at the .05 level of confidence.

To determine which faculty(s) accounted for these differences a SCHEFFE was completed; the difference between Arts and Business was significant at the $< .05$ level of confidence with students in the Arts Faculty attaining significantly higher grades than those in the Business Faculty.

The significance of 2-way interactions between

Table 22

Numbers and Percentages of Mature and Regular Students by Faculty

		Faculty										
Student Status	Arts		Education		Science		Social Science		Business		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Mature	74	35.6	45	21.6	47	22.6	32	15.4	10	4.8	208	50
Regular	64	30.8	45	21.6	38	18.3	29	13.9	32	15.4	208	50
Total	138	33.2	90	21.6	85	20.4	61	14.7	42	10.1	416	100

student status and faculty was reported at .27, indicating that the relationship between average grades and faculty were the same for both mature and regular students.

In studying the drop-out or persisting by faculty for mature students, Table 23 shows that 45 of the 74 students enrolled in the Arts faculty persisted in their program as compared with 29 dropping out. In the Education faculty, 29 students persisted as compared with 16 dropping out. This study showed that 10 mature students registered in the faculty of Business and reported that 9 of them persisted in their programme. Chi square analysis was utilized to test the significance of the differences in drop-out between the various faculty and Chi equaled 15.44 with 8 degrees of freedom. The difference was calculated at .05 suggesting that their differences were significant. From Table 23, it can be observed that the faculty of Business showed a drop out rate of 10% as compared with 39.2% for the faculty of Arts.

When studying the relationship between drop-out and persisting by faculty for the regular group, Table 24 reported the following percentage of dropouts for the various faculties: Arts (40.6), Education (28.2),

Table 23

Numbers and Percentages of Mature Students Persisting or Dropping-out by Faculty

Retention Status	Faculty									
	Arts		Education		Science		Social Science		Business	
	N	%	N	%	N	%	N	%	N	%
Persistors	45	60.8	29	64.4	30	63.8	20	62.5	9	90.0
Drop-Outs	29	39.2	16	35.4	17	36.1	12	37.5	1	10.0
Total	74	35.6	45	21.6	47	22.6	32	15.4	10	48.0

Chi Square = 15.44 with 8 degrees of freedom

Significance = .05

Table 24

Numbers and Percentages of Regular Students Persisting or Dropping-out by Faculty

Retention Status	Faculty									
	Arts		Education		Science		Social Science		Business	
	N	%	N	%	N	%	N	%	N	%
Persistors	38	39.4	33	71.7	25	64.1	22	78.6	21	67.7
Drop-Outs	26	40.6	13	28.2	14	35.9	6	21.5	10	32.3
Total	64	30.8	46	22.1	39	18.8	28	13.5	31	14.9

Chi square = 7.79 with 8 degrees of freedom

Significance = .45

Science (35.9), Social Science (21.5), and Business (32.3).

Chi analysis was utilized to determine if the difference in drop-out or persisting for various faculties was significant and Chi equaled 7.79 with 4 degrees of freedom. Significance equaled .45, indicating that the difference was not significant.

When comparing drop-outs for mature and regular students respectively, Table 25 shows that the greatest difference occurred in faculties of Social Science and Business. It was demonstrated, that in the Social Science faculties, 16% more mature students than regular dropped out; and in the faculty of Business, 32.3% of regular students dropped out, as compared with 10% dropouts for mature.

Chi square analysis revealed that the difference in proportion of dropouts for the various faculties were significant at the .05 level.

Academic Achievement and Residency Status

This study wished to compare the academic performance of students from the university district (residents), with those who transferred to the university district upon admission, (non-resident). Table 26 indicates that 114 of the mature students and 95 of the regular students

Table 25

Numbers and Percentages of Drop-Outs by Faculty

	Arts		Education		Science		Social Science		Business		Total
	N	%	N	%	N	%	N	%	N	%	
Mature	29	39.2	16	35.4	17	36.1	12	37.5	1	10.0	75
Regular	26	40.6	13	28.2	14	35.9	6	21.5	10	32.3	69
Total	55	38.2	29	20.1	31	21.5	18	12.5	11	7.6	144

Chi = 6.63 with 4 degrees of freedom

Significance = .05

Table 26

Numbers and Percentages of Residents and Non-Residents

Residency Status					
Student	Resident		Non-resident		Row Total
Status	N	%	N	%	
Mature	114	54.8	94	45.2	208
Regular	95	45.7	113	54.3	208
Total	209	50.2	207	49.8	416

were residents at the time of admission.

An analysis of variance (ANOVA) was utilized to determine whether there was a significant difference in average grades for residents and non-residents (see Table 27) and results indicated that the difference was not significant ($p = .941$):

The significance of the interaction between mature and regular students respectively for average grades and residency status was reported at .827, indicating that there was no interactive effect.

The analysis of variance indicated that for both mature and regular students, academic achievement appears not to be influenced by residency status.

Concerning the relationship between retention rate at university and residency status, Table 28 showed that 12.4% of residents dropped out voluntarily as compared with 15.0% for students who were non-residents. In comparing required dropouts for residents and non-residents, it was observed that 21.9% of residents and 19.9% of non-residents were required to drop out after failing to meet acceptable academic standards. Chi square analysis was run to determine whether these differences were significant and Chi equaled .746 with 2 degrees of freedom. The significance equaled .68,

Table 27

Analysis of Variance of Average Grades for Mature and
Regular Students by Residency Status

	Mean Squares	Degrees of Freedom	F.	P.
Student Status				
Mature/Regular	1675.00	1	10.75	.001
Residency Status				
	875	1	0.05	.941
Interaction				
Student Status/ Residency Status				
	7.455	1	.048	.827

Table 28

Numbers and Percentages of Residents and Non-Residents
Persisting or Dropping Out

	Persistors		Voluntary Drop-out		Required Drop-out	
	N	%	N	%	N	%
Residents	138	65.7	26	12.4	46	21.9
Non-residents	134	65.0	31	15.0	41	19.9
Column Total	272	65.4	57	13.7	87	20.9

Chi square = .746 with 2 degrees of freedom

Significance = .68

indicating that the difference in dropping out or persisting for residents and non-residents was not significant.

Motivational Differences Between Mature and Regular Students

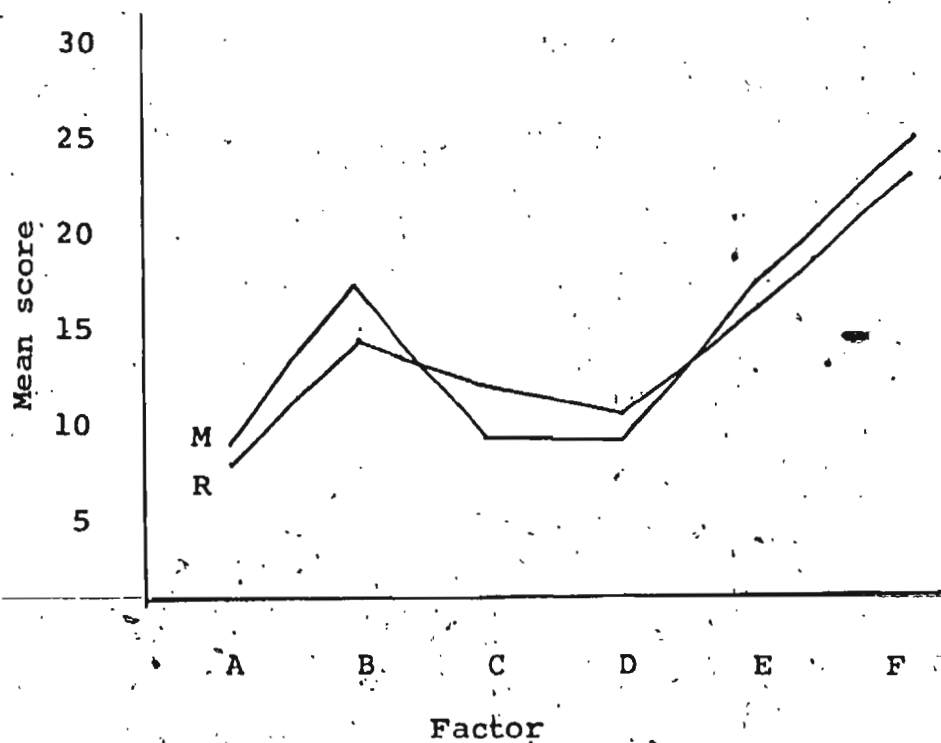
A section of this study concerned itself with the question of whether mature students were more highly motivated than regular students. The self-actualization inventory was utilized for this purpose, the scores of both groups were compared, and an analysis of variance completed. In chapter 3, reference was made to the different factors that this inventory measured: figure II illustrates the difference in means scores, by the mature and regular groups respectively, for each of these factors.

Given the multiple dependant variables (6) resulting from the test of self-actualization, it was decided that the more appropriate analysis of variance would be a multi-variant one. This is particularly so in light of the ipsative nature of this instrument.

The factor of this inventory that was of most interest to this study was the self-actualization factor (factor f). In comparing the raw scores of all subjects,

it was found that the mature students attained a mean score of 24.39, as compared with a mean score of 23.25 for the regular group. A MANOVA was conducted and results indicated that the difference was not significant (see Table 29).

Concerning the motivation of mature and regular students, this study suggested that mature students were not more highly motivated than regular students.



Factor A - Physical

Factor D - Respect

Factor B - Security

Factor E - Independence

Factor C - Relationship

Factor F - Self-Actualization

Figure II: Mean scores of mature (M) and regular (R) students by five (5) factors.

Table 29

Analysis of Variance of Mean Scores for Mature and
Regular Students on a Test of Self-actualization

Source of Variance	Mean	Degrees of	F	P
	Squares	Freedom		
Factor f/mature	21.26	1	.86	.36
Error	24.63	63		

CHAPTER V.

CONCLUSIONS

The following are the major findings in this study:

1. The average grades for regular students at Memorial University were significantly higher than those of the mature students.
2. There were no significant differences in persisting or dropping out for mature and regular students.
3. The proportion of first, second, and third class degrees was not significantly different for mature and regular students.
4. There appears to be a strong relationship between educational background and average grades; and between level of education and persistence at university.
5. For both mature and regular students, females attained significantly higher grades than males.
6. Within the mature group, males dropped out at a rate that was significantly greater than females. Within the regular group, the difference was not significant.
7. For both mature and regular students, there was a significant difference in average grades for students registered in the faculties of Arts and Business, respectively.
8. Academic achievement was not influenced by whether a student was a resident or non-resident of the university district.
9. Students in the sixteen to twenty age group achieved higher grades than those in other age categories.
10. Within the mature group, students in the 21-25 age group attained significantly higher average grades than those in the 41 to 65 group.

11. Married students attained significantly higher grades, and dropped out less frequently, than single students.
12. Mature and regular students did not differ significantly with regards to motivation.

Academic Performance of Mature and Regular Students

One of the salient questions which this study attempted to answer was whether persons admitted to Memorial University of Newfoundland as mature students attained a different level of academic achievement than regular students as determined by (1) average grades, (2) drop-out rate, and (3) class of degree.

Results of the study revealed that the average grades of regular students were significantly higher, at the $<.01$ level of confidence, than those for the mature students. This result is startling as there appears not to be other studies that have shown this same result. Other studies, with the exception of Beagle (1970), suggested that mature students achieved at a level equal to or greater than regular students.

It is difficult to determine specifically why the results of this study are contradictory to the findings of other researchers; it appears that they may be

attributable to a number of factors. Firstly, Memorial University has the same program for both mature and regular students, whereas many Universities and Colleges, at which previous studies were completed, had special programs for adult students. Secondly, for the purpose of this study mature learners included only those students who had not met normal admission requirements, whereas other studies appeared not to differentiate between those adults who met normal admission criteria and those who did not.

In comparing the retention rate between mature and regular students, this study showed that 67% of regular students, and 62% of mature students persisted in their respective programs, and Chi square analysis indicated that this difference was not significant. This difference is not as striking as that of Sikula (1979) nor Roderick and Bell (1981) who reported higher drop-out rates for the mature group. When comparing the number of mature and regular students required to discontinue their university program due to poor academic standing, the difference was again found not to be significant.

Another variable utilized in comparing the academic achievement of the mature learners versus the regular

students was class of degree. This study showed that 72 of the sample of mature students, and 69 of the regular students would have been eligible for a degree during the five (5) years from which subjects were selected for the study.

Fourteen mature students attained degrees within the standard completion period as compared to twenty-six of the regular students; this difference was found to be significant at the $< .05$ level. These results indicated that fewer mature students than regular students acquired their degree in the standard completion period.

In comparing the proportion of first, second, and third class degrees for mature and regular students, this study revealed no significant difference. This result does not support the findings of Roderick and Bell (1981) who indicated that mature students at specified universities received significantly fewer first and second class degrees.

In summarizing the factors utilized to compare the academic performance of mature and regular students, one can conclude that the academic achievement of the regular students was significantly greater than the mature students as evidenced by (1) significantly higher grades than mature (2) smaller percentage of drop-outs than

mature (3) greater number of regular students attaining their degree within the standard completion time.

Level of Education and Academic Performance

After determining whether there was a difference in the academic performance of the mature and regular students, the very basic question of whether or not there was a relationship between academic achievement and level of education upon admission to Memorial University was addressed.

This study showed that mature learners with grade XI general, plus post-secondary, achieved higher grades than those with other levels of education. This group included those who passed grade eleven in high school and then proceeded to other post-secondary schools such as Vocational Schools, College of Fisheries, and so forth. These students not only attained significantly higher grades than other students, but also demonstrated significantly higher retention rate, as only 20.7% dropped out.

Students with grade XI general achieved lower grades than those with higher level of education upon admission, but this difference was not significant. However, their average grades (55.3) were significantly higher than those with educational background of grade X or less.

Students with adult education, grade XI equivalent attained average grades of 50.3 and a review of their drop-out rate revealed that 50% of this group dropped out. Students with grade X or less attained average grades of 30.6 and 75% of them dropped out.

Regarding level of education and academic achievement, there appears to be a direct relationship between level of education and average grades and between level of education and persistence at Memorial University, as students with grade eleven or higher attained significantly higher grades than those with a lesser level of education. This study indicated in the review of the literature that most previous studies reported no significant difference between the academic achievement of students with Junior Matriculation, and those with lesser qualifications upon admission. Bhatnagar (1975), however, reported findings similar to this study in that there was a lower drop-out rate for students possessing a high school diploma than for those having a lesser qualification. Results of research by Brown (1980) and Swarm (1982) were consistent with the author's study.

The above results indicate that perhaps it would be appropriate for the admissions office to establish a

minimum educational level for mature learners. University needs to address the question of whether they should continue to admit persons with less than grade X education, since in this study all students in this category were required to leave after not meeting the minimum academic performance necessary for continued attendance in their program. This may not be a critical question at a time of low enrolment at university, and with such few applicants in this category. However, at times of high enrolment and great competition for available slots, this question will accordingly assume greater importance.

Differing Academic Achievement for Males and Females

This study showed that in the mature group, there were more males (135) than females (73) registered, whereas the opposite was true for regular students, with 95 males and 113 females.

Female students attained significantly higher grades than males in both the mature and regular groups. These findings are consistent with that of Beagle (1970) and Seltzer (1976), who reported higher academic achievement for female mature students than male mature students. French (1977) and Holohan et al. (1983) reported that the difference between GPA of males and females was significant favoring females.

In comparing the drop-out rate for both groups, this study showed that significantly more males (41.5%) than females (25.6%) dropped out. To determine whether this relationship existed within both groups, Chi-square analysis was utilized and revealed that female mature students persisted in their programs significantly more than male mature students. However, in the regular group, the difference in persisting or dropping-out for males and females was not significant. These results are not consistent with studies by Bhatnagar (1975), Holahan et al. (1983) and Ulmer & Verner (cited in Bhatnagar 1975), who reported that female adult students dropped out more often than males.

This study noted that the male-female ratio for mature and regular students differed significantly; the difference in drop-out rate for males and females within the mature group was significant. In the regular group, however, the difference was not significant. The results of this study and the review of the literature were unable to offer any explanations for these two observations and they are being suggested as two areas for future research into the study of the mature learners.

In summary of this variable it has been demonstrated that not only do female mature students achieve higher

grades than their male counterparts, they also drop-out significantly less often.

Academic Achievement and Age

In this study there was a significant difference between the average grades for four (4) categories of age, with the 16-20 age group attaining significantly higher grades than other age categories. This variable may be confounded with level of education, as all students in this age group had attained at least a Grade XI Junior Matriculation level of education prior to admission. Of the four age groups, the 31-plus group attained lowest average grades, and differed significantly from the 21-25 group.

These results support Billingham & Travaglini (1981) who found that students entering their program before age 30 made more rapid progress towards graduation than those above age 30.

Academic Achievement and Marital Status

In comparing the relationship between academic achievement and marital status, this study demonstrated that married students attained significantly higher grades than single students. These results supported the findings of Beagle (1970) in her study of adult students at Lakehead University, but did not support the

results of a study by French (1977) who reported that marital status did not significantly effect semester GPA of a group of third year or later education students at Memorial University.

In comparing numbers of drop-outs for married and single students, it was shown that married students dropped-out less frequently than single students. These findings are not in agreement with a study by Bhatnagar (1975) who reported a greater drop-out rate among married students.

At Memorial University, married students have achieved at a higher level than single students. This study did not attempt to determine why this is so, but it is suggested that since married students are generally older than single students, they may have had more exposure to previous educational opportunity, and more related life experiences that facilitated their adjustment into the university life. This study also showed that although the overall drop-out rate for married students is significantly lower than for single students, more married students than single drop-out voluntarily while still in good academic standing at university. This study did not determine why this is the case, but it may be related to their family responsibilities and perhaps

also to the difficulty of adjusting to what is often a significantly reduced family income. This is an interesting question for further research, in that it would provide good insight into many of the difficulties that the married student encounters in his or her attempts to upgrade their education.

Academic Achievement and Faculty

This study demonstrated that for both mature and regular students, there was a significant difference in average grades for students registered in the faculties of Arts and Business respectively. The difference between average grades for students in other faculties was not significant. Unlike studies by Perkins (1971) and Beagle (1970), the proportion of mature versus regular enrolled in the Arts and Humanities was not significantly different. The results of this study demonstrated that mature students achieved average grades that were no different than regular students, regardless of faculty.

In considering the proportion of dropouts or persistors for mature and regular students, this study demonstrated that the dropout rate for mature and regular students, within specific faculty, was significantly different. These differences were most obvious in the faculty of Business and Social Sciences. Within the

Social Science faculty, 16% more mature students than regular dropped out. In the Business faculty, however, 22.3% more regular students than mature dropped out. Within other faculties, both mature and regular students persisted or dropped out at about the same rate.

Within the mature group it was observed that the difference between the numbers of persistors and dropouts in various faculty was significant. This difference was shown to exist as a consequence of the extremely high percentage of persistors (90%) in the faculty of Business. This also differs from the proportion of regular persistors (67%) in this faculty. This study showed that a much smaller percentage of mature than regular students enrolled in the Business faculty; those who did, however, showed a low dropout. It is pointed out, however, that the small number of mature students (10) in the Business faculty makes it difficult to generalize from these results.

In summarizing the relationship between persisting at university by faculty, it was shown that within the faculties of Arts, Education, and Science, the proportion of dropouts and persistors for mature and regular students were about the same. In the faculty of Business, the mature students dropped out more frequently than regular

students; and dropped out less frequently than regular students in the Social Science faculties.

Academic Achievement and Residency Status

In researching the literature, and in talking to the subjects of this study, a commonly recurring theme was that adjustments associated with relocating to the university district were often traumatic. However, the results of this study do not support the widely prevalent assumption that such adjustments may contribute to poor academic performance. The analysis of variance of average grades for mature and regular students indicated that academic achievement appears not to be influenced by whether or not a student is a resident or non-resident.

In considering the relationship between residency status and dropping out or persisting, this study demonstrated that residency status had no influence on the retention rate for either mature or regular students.

Motivation of Mature and Regular Students

Another question that this study addressed was whether or not mature students were more highly motivated than regular students. A comparison of scores for mature and regular students on a self-actualization test indicated

that there was no significant difference in the two groups. This is interesting since, in the literature, it was evident that many researchers had expressed the assumption that mature students would achieve, or could be expected to achieve, as well as younger students because they are more mature, and more highly motivated to achieve.

This self-actualization inventory was not specifically designed for use in the manner chosen in this study although the authors of the inventory indicate that it was useful for comparison of need profiles for various homogenous groups. Its effectiveness as an indicator of level of motivation requires further validation and study.

Recommendations

This study demonstrated that mature students admitted to Memorial University attain significantly lower grades than regular students. Since most other studies have shown that the mature learner at other educational institutions perform as well as, or better than, their younger counterparts, it would seem appropriate that admission procedures for mature students at Memorial University would be reviewed. In particular, it is recommended that there be established a minimum level of education for university entrance, as all students with high school education of grade X or less achieved extremely low grades. Furthermore, seventy-five percent of all students having grade X or less upon admission dropped out.

Given the relatively low success rate of mature students in this study, the author would recommend that Memorial University would include in its admission criteria, pre-admission seminar and assignment and/or induction course. Barrett and Powell (1980) indicated that such an admissions procedure was implemented with good success at the University of New South Wales, as evidenced by the very high grades attained by mature students.

As a result of this study, the author has identified a number of areas as being highly appropriate for further research.

This study has stated how little research has been directed towards Maslow's theory of motivation despite the apparent great popularity of his self-actualization process. It appears that tests of motivation that are based on self-actualization theory have been developed largely for workers within organizations. Since self-actualization based motivation has attained such great interest, it would be appropriate to develop a self-actualization measure that would be useful in educational settings - as a selection and placement tool, a counselling aid, or as a predictor of success at post-secondary facilities.

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APPENDIX

The following is a list of questions and information which the Registrar's Office felt would be relevant in a study of mature students.

1. A comparison of the success rate between students admitted under the Mature Student Clause, and those admitted with Junior Matriculation.
2. The marital status of Mature Students.
3. The reason or reasons for pursuing a post-secondary Education at this University.
4. Patterns or indications of Mature Students' career plans after university study.
5. Correlation, if any, between the number of years completed in school and the Mature Students' success in University.
6. A comparison of the academic standing of urban Mature Students and rural Students.
7. Relationships, if any, between Mature Students, family size and father's level of education, with success in university studies.
8. Relationships, if any, between, socio-economic class and academic success among Mature Students.

9. Financial considerations of entering university - did financial aspects of obtaining a post-secondary education encourage or impede the Mature Students' desire to go to university.
10. The decision to enter university - is it a conscious career choice or a shot-in-the-dark decision (i.e. simply the result of not being able to obtain a job).
11. Mature Student counselling - do Mature Students, particularly full-time Students, feel that specific counselling services or a special orientation week would make their adaptation to university life easier.
12. Should Mature Students be allowed to 'opt out' of foundation courses as they can at present.
13. Should the University require some form of standardized testing, such as the G.E.D. or the B.T.S.D. to determine the "suitability" of Mature Students for admission to university study.
14. Are enough people who could qualify for admission as Mature Students aware of the existence of the Mature Student Admission Clause.

15. How did most students who applied for Mature
Students status hear of this particular
admissions clause.



